



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,715	07/28/2003	James B. Keller	5500-39403	6678

35690 7590 03/21/2007
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.
700 LAVACA, SUITE 800
AUSTIN, TX 78701

EXAMINER

WINDER, PATRICE L.

ART UNIT	PAPER NUMBER
----------	--------------

2145

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/628,715	Applicant(s) KELLER ET AL.	
	Examiner Patrice Winder	Art Unit 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7-28-2003; 10-24-2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 20-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagersten, EP 0 817 073 A2 (hereafter referred to as Hagersten) in view of .

4. Regarding claim 20, Hagersten taught a computer system (column 7, lines 47-50) comprising:

a first node (SMP node 12A) configured to initiate a transaction (make a memory request) by transmitting a request (); and

a second node (SMD 12B) coupled to receive the request from the first node, wherein the second node is configured to generate to a probe in response to the request (column 18, lines 23-);

and wherein the probe includes a header that designates a receiving node to receives responses to the probe (column 17, lines 16-19); and

wherein the receiving node is the first node responsive to the transaction having a first type (READ transaction, column 7, lines 43-45), and wherein the receiving node is the second node responsive to the transaction having a second type (WRITE transaction, column 7, lines 45-47).

Hagersten does not specifically teach the header provides an indication. However, Sharma et al. taught a probe includes an indication that designates a receiving node to receive responses to the probe (column 16, lines 39-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made that incorporating Sharma's indication of designated receiving nodes in Hagersten's multiprocessor system for maintaining cache coherency would have improved system efficiency. The motivation would have been to provide more efficient ordering of memory reference operations issued by a processing mode.

5. Regarding dependent claim 21, Hagersten taught the probe comprises a packet including a command field identifying the packet as a probe (column 17, lines 16-19; column 18, lines 10-15) and the indication is included within the command field (column 25, lines 31-40).

6. Regarding dependent claim 22, Hagersten taught a computer system further comprising a third node coupled to receive the probe (column 18, lines 45-47).
7. Regarding dependent claim 23, Hagersten taught the computer system further comprising a third (SMD 12C) configured to generate a probe response, wherein the third node is configured to route the probe response responsive to the indication (column 18, lines 57-58; column 19, lines 1-3).
8. Regarding dependent claim 24, Hagersten taught the second type is a write of a first number of bytes, the first number of bytes being less than a second number of bytes in a cache block of data (column 7, lines 45-47).
9. Regarding dependent claim 25, Hagersten taught the first type is other than the write (column 7, lines 43-45).
10. Regarding dependent claim 26, Sharma taught the probe comprises a first packet including a target node field identifying a second processing node and a source node field identifying the first probe processing (column 16, lines 39-43).
11. Regarding dependent claim 27, Hagersten taught the computer system further comprising a third node coupled to receive the probe and generate a probe response to the probe (column 18, lines 45-49, 57-58; column 19, lines 1-3), and wherein the probe response comprises a second packet including a response node field (column 17, lines 16-19; column 19, lines 1-4), and wherein the third node is configured to use a value from the target node field of the first packet as the value in the response node field responsive to the indication designating the second node as the receiving node (column 7, lines 45-47; column 24, lines 41-53).

Art Unit: 2145

12. Regarding dependent claim 28, Hagersten taught the third node is configured to use a value from the source node field of the first packet as the value in the response node field responsive to the indication designating the first node as the receiving node (column 7, lines 43-45; column 20, lines 22-37, 48-50).

13. Regarding dependent claim 29, Hagersten taught the second node comprises a memory a controller configured to communicate with a memory in which the cache block is stored (column 11, lines 3-16), and wherein the memory controller is configured to generate a probe in response to selecting the request to access the memory (column 18, lines 23-27).

14. The language of claims 30-49 is substantially the same as previously rejected claims 20-29, above. Therefore, claims 30-49 are rejected on the same rationale as previously rejected claims 20-29, above.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

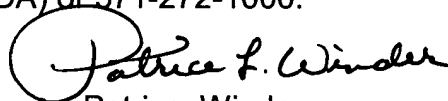
16. Hagersten et al., EP 0 820 016 A2: maintaining memory coherency using a request agent, a home agent and one or more slave agents.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrice Winder whose telephone number is 571-272-3935. The examiner can normally be reached on Monday-Friday, 10:30 am-7:00 pm.

Art Unit: 2145

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, reading "Patrice L. Winder". The signature is written in a cursive style with a large, looped initial "P".

Patrice Winder
Primary Examiner
Art Unit 2145

March 18, 2007